

D. In the Claims

10. (currently amended) A nonaqueous secondary cell, comprising:

(a) a positive electrode active material containing lithium composite manganese oxide having spinel structure whose primary particle diameter is not less than 0.05 μm and not greater than 10 μm , forming an aggregate, and whose specific surface area measured by the BET method is not less than 0.2 m^2/g and not greater than 2 m^2/g ;

(b) a negative electrode containing a material capable of reversively doping and dedoping lithium, wherein the material capable of reversively doping and dedoping lithium is at least one selected from the group consisting of a carbon material, metal lithium, lithium alloy, polyacene, and polypyrol; and

(c) wherein the carbon material is at least one selected from the group consisting of pyrocarbon, coke, glassy carbon, organic polymer compound sintered body, and carbon fiber;
and

(d) wherein the lithium composite manganese active material is expressed by a general formula $\text{Li}_x\text{Mn}_{2-y}\text{M}_y\text{O}_4$, wherein $.09 \leq x \leq 1.4$; $y \leq .3$; and M is one or more materials selected from the group consisting of Ti, V, Cr, Fe, Co, Ni, and Al.

11. Cancel.

12. (previously added) The nonaqueous secondary cell of claim 12 44, wherein the positive electrode comprises about 86% of the positive electrode active material, about 10% graphite, and about 4% polyvinylidene fluoride.

13. (previously added) A method of producing a positive electrode material active material for a non-aqueous electrolyte cell, comprising:

- (a) mixing a first ingredient with a lithium composite manganese oxide of about 86% by weight of the lithium composite manganese oxide;
- (b) molding the mixture under pressure;
- (c) sintering the mixture at a temperature not lower than 600°C and not higher than 900°C.

14. (previously added) The method of claim 13, further comprising pulverizing the sintered mixture.

15. (previously added) The method of claim 13, wherein the step of mixing the first ingredient further includes creating a slurry of 86% by weight of lithium composite manganese oxide, about 10% by weight of graphite, about 4% polyvinylidene fluoride, which then dissolved in a solvent.

16. (previously added) The method of claim 15, further comprising uniformly applying the slurry to aluminum foil to obtain a thickness of about 20 um.

17. (previously added) A nonaqueous electrolyte secondary cell, comprising:

- (a) a positive electrode containing as a positive electrode active material a lithium composite manganese oxide having spinel structure and whose primary particle diameter is not less than 0.05 μ m and not greater than 10 μ m, forming an aggregate, and whose specific surface measured by the BET method is not less than 0.2 m^2/g and not greater than 2 m^2/g ;

(b) a negative electrode containing a carbon material selected from the group consisting of pyrocarbon, coke, glassy carbon, organic polymer compound sintered body, and carbon fiber; and

(c) an electrolyte.

18. (previously added) The nonaqueous electrolyte secondary cell of claim 17, wherein the negative electrode contains a material capable of reversively doping and dedoping lithium.

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Catalyst*

19. (previously added) The nonaqueous electrolyte secondary cell of claim 18, wherein the material capable of reversively doping and dedoping lithium is at least one selected from the group consisting of a carbon material, metal lithium, lithium alloy, polyacene, and polypyrol.

20. (previously added) The nonaqueous electrolyte secondary cell of claim 17, wherein the positive electrode comprises about 86% of the positive electrode active material, about 10% graphite, and about 4% polyvinylidene fluoride.

21. (previously added) The nonaqueous electrolyte secondary cell of claim 17, wherein the electrolyte is at least one selected from the group consisting of LiClO₄, LiAsF₆, LiPF₆, LiB(C₆H₅)₄, LiCl, LiBr, CH₃SO₃Li, and CF₃SO₃Li.

22. (previously added) The nonaqueous electrolyte secondary cell of claim 17, wherein the electrolyte is dissolved in an organic solvent that is selected from the group consisting of propylene carbonate; ethylene carbonate; 1,2-dimethoxymethane; gamma-butyrolactone;

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tetrahydrofuran; 2-methyltetrahydrofuran; 1,3-dioxolane; sulfolane; acetonitrile; diethyl carbonate; and dipropyl carbonate.